

## **An Audit to Look at the Management of Paediatric Peri Orbital Cellulitis in a District General Hospital, Emergency Department**

**Authors :** Ruth Green, Samantha Milton, Rinal Desai

**Abstract :** Background/Aims: Eye pain/swelling/redness is a common presentation to Barnet General Hospital (a district general hospital), pediatric emergency department, and is managed by both the pediatric and emergency teams. The management of each child differs dramatically depending on the healthcare professional who reviews them. There also appears to be confusion in diagnosis between periorbital cellulitis, pre-septal cellulitis, and orbital cellulitis. Pre-septal cellulitis refers to an inflammation of the eyelids and soft tissue anterior to the orbital septum. In contrast, orbital cellulitis is a serious, rapidly progressive infection of soft tissues located posterior to the orbital septum. Pre-septal cellulitis is more prevalent and less serious than orbital cellulitis, although it may be part of a continuous spectrum if untreated. Pre-septal cellulitis should be diagnosed and treated urgently to prevent spread to the septum. For the purpose of the audit, the term periorbital cellulitis has been used as an umbrella term for all spectrums of this infection. The audit aimed to look at, how as a whole, the department is diagnosing and managing orbital and pre-septal cellulitis. Gold Standard: Patients of the same age and diagnosis should be treated with the same medication, advice, and follow-up. Method: Data was collected retrospectively from pediatric patients (< 18years) who attended the emergency department from June 2019 to February 2020 who had been coded as pre-septal cellulitis, periorbital cellulitis, orbital cellulitis, or eye pain/swelling/redness. Demographics, signs and symptoms, management, and follow-up were recorded for all patients with any of the diagnoses of pre-septal, periorbital, or orbital cellulitis. A Microsoft Excel spreadsheet was used to record the anonymised data. Results: There were vast discrepancies in the diagnosis, management, and follow-up of patients with periorbital cellulitis. Conclusion/Discussion: The audit concluded there is no uniform approach to managing periorbital cellulitis in Barnet General Hospital Paediatric Emergency Department. Healthcare professionals misdiagnosed conjunctivitis as periorbital cellulitis, and adequate steps did not appear to be documented on excluding red flag signs and symptoms of patients presenting. There was no consistency in follow-up, with some patients having timely phone reviews or clinical reviews for mild symptoms. Advice given by the staff was appropriate, and patients did return when symptoms got worse and were treated accordingly. Plan: Given the inconsistency, a gold standard care pathway or local easily accessible clinical guideline can be developed to help with the diagnosis and management of periorbital cellulitis. Along with this, a teaching session can be carried out for the staff of the pediatric team and emergency department to disseminate the teaching. Following the introduction of a guideline and teaching sessions, patients notes can be re-reviewed to check improvement in patient care.

**Keywords :** periorbital cellulitis, preseptal cellulitis, orbital cellulitis, erythematous eyelid

**Conference Title :** ICEMHS 2021 : International Conference on Emergency Medicine and Healthcare Systems

**Conference Location :** Paris, France

**Conference Dates :** July 19-20, 2021